

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1-7 (Canceled)

Claim 8 (Currently Amended): Creep-proof and corrosion-resistant nickel-based alloy comprising, in wt-%:

0.0015 to 0.60 carbon (C);

0.20 to 0.90 nitrogen (N);

22.0 to 32.0 chromium (Cr);

5.0 to 20.0 elements of the groups 4, 5, and 6 of the periodic table, except Cr;

0.03 to 3.0 aluminum (Al);

0.4 to 3.0 silicon (Si);

maximum of 0.014 phosphorus (P); maximum of 0.004 sulfur (S);

up to 0.60 manganese (Mn);

minimum of 51 of nickel (Ni) or a combination of nickel (Ni) and cobalt (Co); and

melting-related contaminants, and

the alloy including at least one of nitrides or carbides in intercrystalline regions to

substantially prevent intercrystalline sliding due to stable deposits in the intercrystalline regions.

Claim 9 (Previously Presented): Nickel-based alloy according to claim 8, comprising, in wt-%, 0.16 to 0.5 C.

Claim 10 (Previously Presented): Nickel-based alloy according to claim 8, comprising a ratio of nitrogen to carbon of 0.5 to 5.5.

Claim 11 (Previously Presented): Nickel-based alloy according to claim 10, wherein the ratio of nitrogen to carbon is 1 to 4.

Claim 12 (Previously Presented): Nickel-based alloy according to claim 10, wherein the ratio of nitrogen to carbon is 1 to 3.

Claim 13 (Previously Presented): Nickel-based alloy according to claim 8, comprising a total concentration of molybdenum (Mo) and tungsten (W), in wt-%, according to the following formula:

$$\text{Mo} + \text{W}/2 = 3.0 \text{ to } 10.0.$$

Claim 14 (Previously Presented): Nickel-based alloy according to claim 13, comprising a total concentration of molybdenum (Mo) and tungsten (W), in wt-%, according to the following formula:

$$\text{Mo} + \text{W}/2 = 4.0 \text{ to } 8.0.$$

Claim 15 (Previously Presented): Nickel-based alloy according to claim 8, comprising, in wt-%, 25.0 to 30.0 Cr.

Claim 16 (Previously Presented): Nickel-based alloy according to claim 8, comprising, in wt-%, 0.5 to 1.0 Si.

Claim 17 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%.

Claim 18 (Previously Presented): Nickel-based alloy according to claim 17, comprising, in wt-%, 0.01 to 0.12 of at least one element of Group 3 of the periodic table, except actinoids.

Claim 19 (Previously Presented): Nickel based-alloy according to claim 8, comprising manganese (Mn), said Mn being present up to 0.60 wt-%.

Claim 20 (Previously Presented): Nickel based-alloy according to claim 8, comprising iron (Fe), said Fe being present up to 14.8 wt-%.

Claim 21 (Previously Presented): Nickel based-alloy according to claim 8, comprising boron (B), said B being present up to 0.01 wt-%.

Claim 22 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising manganese (Mn), said Mn being present up to 0.60 wt-%; comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 23 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising iron (Fe), said Fe being present up to 14.8 wt-%.

Claim 24 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 25 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 26 (Previously Presented): Nickel based-alloy according to claim 8, comprising manganese (Mn), said Mn being present up to 0.60 wt-%; comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 27 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; and comprising manganese (Mn), said Mn being present up to 0.60 wt-%.

Claim 28 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; and comprising iron (Fe), said Fe being present up to 14.8 wt-%.

Claim 29 (Previously Presented): Nickel based-alloy according to claim 8, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 30 (Previously Presented): Nickel based-alloy according to claim 8, comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising iron (Fe), said Fe being present up to 14.8 wt-%.

Claim 31 (Previously Presented): Nickel based-alloy according to claim 8, comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 32 (Previously Presented): Nickel based-alloy according to claim 8, comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 33 (Currently Amended): Creep-proof and corrosion-resistant nickel-based alloy consisting essentially of, in wt-%:

0.0015 to 0.60 carbon (C);

0.20 to 0.90 nitrogen (N);

22.0 to 32.0 chromium (Cr);

5.0 to 20.0 elements of the groups 4, 5, and 6 of the periodic table, except Cr;

0.03 to 3.0 aluminum (Al);

0.4 to 3.0 silicon (Si);

maximum of 0.014 phosphorus (P);

maximum of 0.004 sulfur (S);

up to 0.15 of at least one element of Group 3 of the periodic table, except actinoids;

up to 0.60 manganese (Mn);

up to 14.8 iron (Fe);

up to 0.01 (B);

minimum of 51 of nickel (Ni) or a combination of nickel (Ni) and cobalt (Co); and

melting-related contaminants, and
the alloy including at least one of nitrides or carbides in intercrystalline regions to
substantially prevent intercrystalline sliding due to stable deposits in the intercrystalline regions.

Claim 34 (Previously Presented): Nickel-based alloy according to claim 33, comprising a total concentration of molybdenum (Mo) and tungsten (W), in wt-%, according to the following formula:

$$\text{Mo} + \text{W}/2 = 3.0 \text{ to } 10.0.$$

Claim 35 (Previously Presented): Nickel based-alloy according to claim 33, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising manganese (Mn), said Mn being present up to 0.60 wt-%; comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 36 (Previously Presented): Nickel based-alloy according to claim 33, comprising at least one element of Group 3 of the periodic table, except actinoids, said at least one element being present up to 0.15 wt-%; comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 37 (Previously Presented): Nickel based-alloy according to claim 33, comprising manganese (Mn), said Mn being present up to 0.60 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.

Claim 38 (Previously Presented): Nickel based-alloy according to claim 33, comprising iron (Fe), said Fe being present up to 14.8 wt-%; and comprising boron (B), said B being present up to 0.01 wt-%.